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annual data 1987

COPPER · BRASS · BRONZE

copper supply & consumption

1966-1986

COPPER DEVELOPMENT ASSOCIATION INC.

Preface

Statistical data on the supply and consumption of copper and copper alloys in the United States are available from many governmental and private sources. In this report original data from these sources are brought together and rationalized by CDA and American Bureau of Metal Statistics Inc. (ABMS) to provide a set of data on U.S. copper supply and consumption that is both consistent and accurate in all aspects from mine to end-use market.

The main sources of information assembled here are the Bureau of Mines in the U.S. Department of the Interior, the Bureau of the Census in the U.S. Department of Commerce, and Copper Development Association Inc. Where data from different sources are conflicting, and where original data appear to be in error, the best judgment has been applied. General sources are shown in the tables throughout the report. Those interested to know the specific sources of any of the data should contact CDA.

The statistics are arranged in a logical sequence to trace the flow of copper in the U.S. economy from mining and scrap collection through smelting, refining and ingot making to the wire rod and wire mills, brass mills, and foundries and then on to the final end-use markets. This flow is shown schematically on pages 4–5. On this schematic flowsheet the major statistics of copper supply and consumption in the United States for 1986 appear. Along with each major statistic on the chart, a reference is shown. This reference identifies the table in the report where details on that item, from 1966 through 1986, will be found. Most data for 1986 are preliminary.

There are four major tables in the report. *Table 1* covers the supply of primary copper. *Table 2* presents data on the supply of copper from secondary sources. In *Table 3*, statistics on the consumption of primary and secondary metals by mills, foundries and other industries are summarized. These three tables are provided by ABMS. Finally, *Table 4* details the supply of mill, foundry and powder products and their consumption in the five end-use market areas. In each of these tables, additions to the flow (such as net imports) are indicated as positive numbers, while subtractions from the flow (such as melting losses or net additions to stocks) are shown as negative numbers.

The arrangement of the data in the report can be illustrated with an example. Consider *Mine Production*, the upper left-hand box in the flowsheet on page 4. As shown in the box, mine production of copper in the United States totaled 1,267.4 thousand short tons in 1986. Beneath this figure a number appears referring to *Table 1, Item 1*, abbreviated *1 (1)*. This means that in *Table 1*, on Line (1), mine production is shown for the full period 1966 through 1986. In *Table 1*, on Line (1), a further reference will be found after the item heading *Mine Production*, directing the reader to page 7. This reference means that further details on mine production appear on page 7. In fact, on page 7, a table entitled *Table 1, Item 1* presents the data on mine production by state for 1966 through 1986. In this way all the data on supply and consumption appear in logical sequence proceeding through the report, eliminating the need for explanatory text.

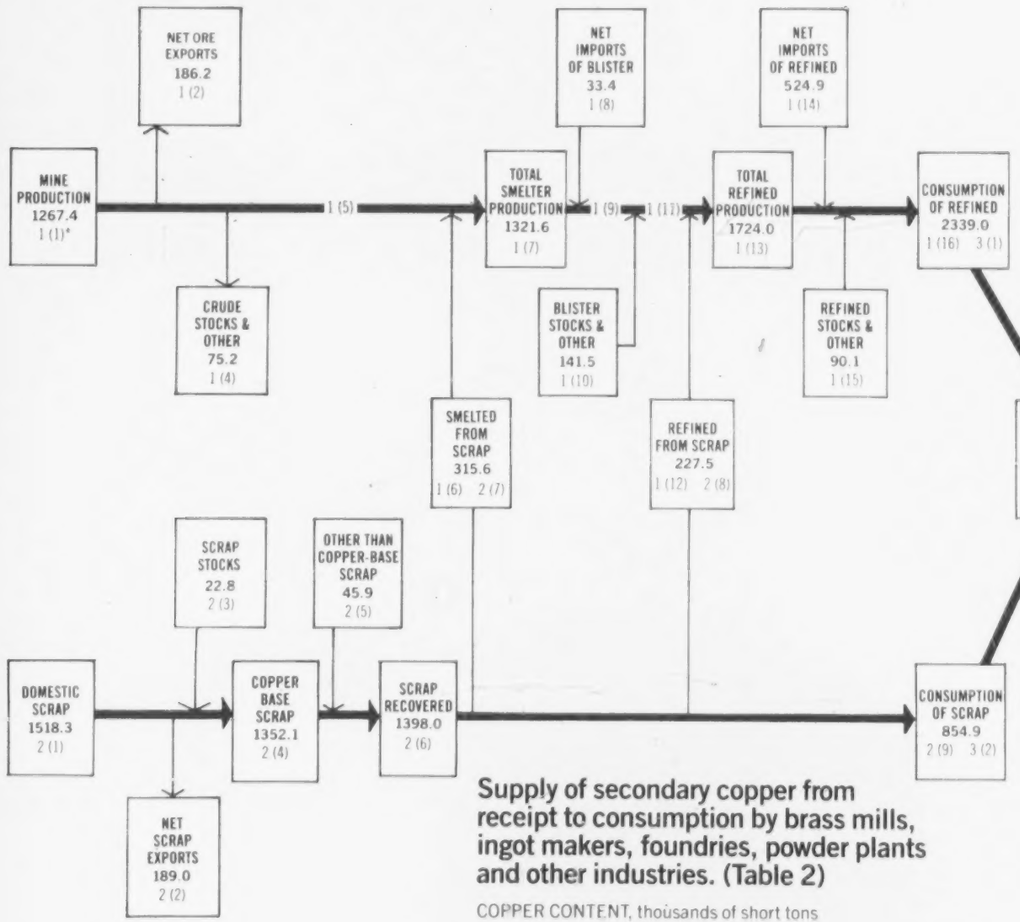
Contents

	Page
Preface	1
Copper supply and consumption—A schematic flow chart	4
Table 1, Supply of primary copper	6
Item 1, Mine production—U.S.	7
Mine production—world	7
Item 2, Imports and exports of ore	8
Item 7, Smelter production	8
Item 8, Imports and exports of blister copper	8
Item 10, Blister stocks and other	9
Item 13, Production of refined copper	9
Item 14, Imports and exports of refined copper	9
Item 15, Refined stocks and other	10
Item 16, Consumption of refined copper	10
Table 2, Supply of secondary copper	11
Item 2, Imports and exports of scrap	12
Item 3, Scrap stocks	12
Item 6, Recovery from scrap	13
Item 9, Consumption of scrap	13
Table 3, Consumption of metals by mills, foundries and others	14
Item 3, Consumption of copper by mills, foundries and others	15
Item 8, Consumption of alloying metal by mills, foundries and others	16
Item 12, Net consumption of metals by mills, foundries and others	17
Table 4, Supply and consumption of mill, foundry and powder products	18
Item 16, Supply of brass mill products—U.S.	19
Supply of brass mill products—other countries	19
Item 20, Imports and exports of mill and powder products	20

Copper supply and consumption in the United States 1986

Supply of primary copper from mine to consumption by wire rod mills, brass mills, ingot makers, foundries, powder plants and other industries. (Table 1)

COPPER CONTENT, thousands of short tons

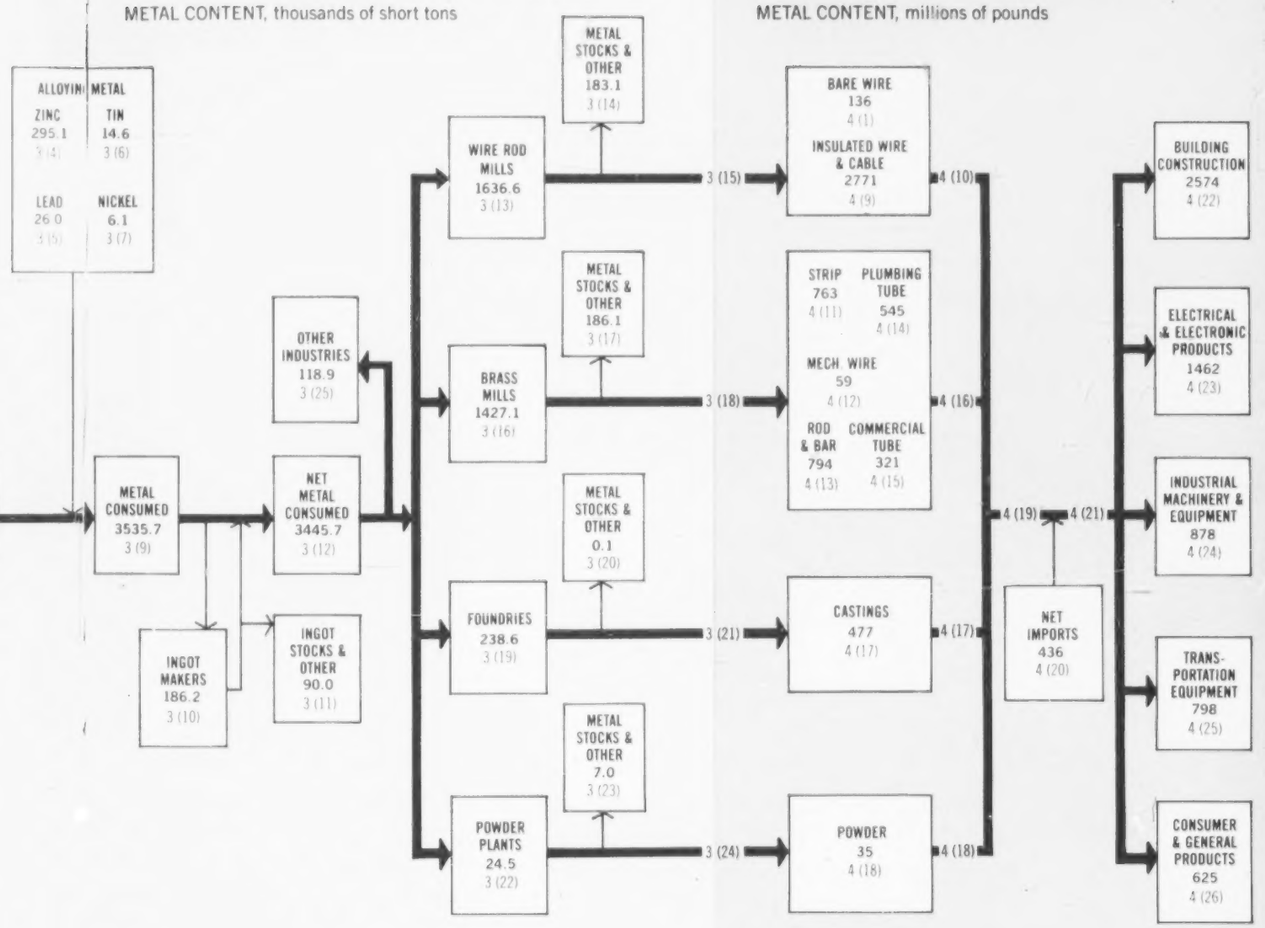

NET ORE EXPORTS 186.2 1 (2)
MINE PRODUCTION 1267.4 1 (1)*
1 (5)
CRUDE STOCKS & OTHER 75.2 1 (4)
NET IMPORTS OF BLISTER 33.4 1 (8)
TOTAL SMELTER PRODUCTION 1321.6 1 (7)
1 (9)
1 (11)
BLISTER STOCKS & OTHER 141.5 1 (10)
NET IMPORTS OF REFINED 524.9 1 (14)
TOTAL REFINED PRODUCTION 1724.0 1 (13)
CONSUMPTION OF REFINED 2339.0 1 (16) 3 (1)
REFINED STOCKS & OTHER 90.1 1 (15)
SMELTED FROM SCRAP 315.6 1 (6) 2 (7)
REFINED FROM SCRAP 227.5 1 (12) 2 (8)
COPPER CONSUMED 3193.9 3 (3)
SCRAP STOCKS 22.8 2 (3)
OTHER THAN COPPER-BASE SCRAP 45.9 2 (5)
DOMESTIC SCRAP 1518.3 2 (1)
COPPER BASE SCRAP 1352.1 2 (4)
SCRAP RECOVERED 1398.0 2 (6)
CONSUMPTION OF SCRAP 854.9 2 (9) 3 (2)
NET SCRAP EXPORTS 189.0 2 (2)

Supply of secondary copper from receipt to consumption by brass mills, ingot makers, foundries, powder plants and other industries. (Table 2)

COPPER CONTENT, thousands of short tons

Consumption of metals by wire rod mills, brass mills, ingot makers, foundries, powder plants and other industries. (Table 3)

METAL CONTENT, thousands of short tons


ALLOYING METAL
ZINC 295.1 3 (4)
TIN 14.6 3 (6)
LEAD 26.0 3 (5)
NICKEL 6.1 3 (7)
OTHER INDUSTRIES 118.9 3 (25)
METAL CONSUMED 3535.7 3 (9)
NET METAL CONSUMED 3445.7 3 (12)
INGOT MAKERS 186.2 3 (10)
INGOT STOCKS & OTHER 90.0 3 (11)
METAL STOCKS & OTHER 183.1 3 (14)
WIRE ROD MILLS 1636.6 3 (13)
3 (15)
METAL STOCKS & OTHER 186.1 3 (17)
BRASS MILLS 1427.1 3 (16)
3 (18)
METAL STOCKS & OTHER 0.1 3 (20)
FOUNDRIES 238.6 3 (19)
3 (21)
METAL STOCKS & OTHER 7.0 3 (23)
POWDER PLANTS 24.5 3 (22)
3 (24)

Supply of wire mill, brass mill, foundry and powder products and their consumption in the end-use markets. (Table 4)

METAL CONTENT, millions of pounds

BARE WIRE 136 4 (1)
INSULATED WIRE & CABLE 2771 4 (9)
4 (10)
STRIP 763 4 (11)
PLUMBING TUBE 545 4 (14)
MECH. WIRE 59 4 (12)
ROD & BAR 794 4 (13)
COMMERCIAL TUBE 321 4 (15)
4 (16)
CASTINGS 477 4 (17)
4 (17)
POWDER 35 4 (18)
4 (18)
4 (19)
4 (21)
NET IMPORTS 436 4 (20)
BUILDING CONSTRUCTION 2574 4 (22)
ELECTRICAL & ELECTRONIC PRODUCTS 1462 4 (23)
INDUSTRIAL MACHINERY & EQUIPMENT 878 4 (24)
TRANS-PORTATION EQUIPMENT 798 4 (25)
CONSUMER & GENERAL PRODUCTS 625 4 (26)

*1 (1) Refers to table and item in report where data for 1966 through 1986 appear.

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Table 1

Supply of primary copper from mine to consumption by wire rod mills, brass mills, ingot makers, foundries, powder plants and other industries

	COPPER CONTENT, thousands of short tons																				
	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986p
(1) Mine Production (page 7)	1,429.2	954.1	1,204.6	1,544.6	1,719.7	1,522.2	1,664.8	1,717.9	1,597.0	1,413.4	1,605.6	1,504.0	1,496.5	1,594.6	1,301.9	1,695.5	1,264.3	1,144.3	1,215.4r	1,218.9r	1,267.4
(2) Net Ore Imports (page 8)	40.5	−5.7	−37.4	37.9	−27.7	23.1	35.4	19.4	36.7	65.7	74.8	42.2	13.9	−23.9	−101.2	−130.2	−107.1	55.7	−50.2	−120.5	−186.2
(3) Total Crude Primary	1,469.7	948.4	1,167.2	1,582.5	1,692.0	1,545.3	1,700.2	1,737.3	1,633.7	1,479.1	1,680.4	1,546.2	1,510.4	1,570.7	1,200.7	1,565.3	1,157.2	1,200.0	1,165.2r	1,098.4r	1,081.2
(4) Crude Stocks and Other	−80.0	−86.1	99.3	3.0	−50.7	−45.3	−9.8	6.7	−63.8	−32.0	−145.7	−111.0	−90.2	−98.4	−89.2	−113.8	−81.7	−177.3	−47.3r	−58.4r	−75.2
(5) Smelter Production From Primary	1,389.7	862.3	1,266.5	1,585.5	1,641.3	1,500.0	1,690.4	1,744.0	1,569.9	1,447.1	1,534.7	1,435.2	1,420.2	1,472.3	1,111.5	1,451.5	1,075.5	1,022.7	1,117.9r	1,040.0	1,006.0
(6) Smelter Production From Scrap	114.6	70.7	84.8	77.3	78.9	66.3	69.0	77.8	79.5	49.4	51.0	49.4	59.8	66.4	49.5	67.1	49.7	65.3	186.6r	275.4r	315.6
(7) Total Smelter Production (page 8)	1,504.3	933.0	1,351.3	1,662.8	1,720.2	1,566.3	1,759.4	1,821.8	1,649.4	1,496.5	1,585.7	1,484.6	1,480.0	1,538.7	1,161.0	1,518.6	1,125.2	1,088.0	1,304.5r	1,315.4r	1,321.6
(8) Net Imports of Blister (page 8)	349.2	248.3	255.0	233.6	216.6	128.0	148.9	146.6	205.1	87.4	41.1	28.3	70.0	66.9	47.6	71.1	111.8	79.4	57.1	11.6r	33.4
(9) Total Blister	1,853.5	1,181.3	1,606.3	1,896.4	1,936.8	1,694.3	1,908.3	1,968.4	1,854.5	1,583.9	1,626.8	1,512.9	1,550.0	1,605.6	1,208.6	1,589.7	1,237.0	1,167.4	1,361.6r	1,327.0r	1,355.0
(10) Blister Stocks and Other (page 9)	−27.9	22.4	−84.1	−76.3	−92.8	−36.2	33.9	−22.1	−120.3	−91.1	−36.5	32.7	107.1	131.2	175.6	179.4	165.0r	200.9	108.8r	113.7r	141.5
(11) Refined Production from Blister	1,825.6	1,203.7	1,522.2	1,820.1	1,844.0	1,658.1	1,942.2	1,946.3	1,734.2	1,492.8	1,590.3	1,545.6	1,657.1	1,736.8	1,384.2	1,769.1	1,402.0r	1,368.3	1,470.4r	1,440.7r	1,496.5
(12) Refined Production from Scrap	357.7	322.9	316.8	394.8	398.7	304.3	316.3	366.3	404.4	282.1	300.2	303.0	362.3	441.2	474.3	465.1r	465.7r	377.5r	171.5r	142.6r	227.5
(13) Total Refined Production (page 9)	2,183.3	1,526.6	1,839.0	2,214.9	2,242.7	1,962.4	2,258.5	2,312.6	2,138.6	1,774.9	1,890.5	1,848.6	2,019.4	2,178.0	1,858.5	2,234.2r	1,867.7r	1,745.8r	1,641.9r	1,583.3r	1,724.0
(14) Net Imports of Refined (page 9)	−117.0	168.7	149.3	−83.8	−89.9	−23.7	9.7	8.8	177.2	−26.4	266.1	327.8	342.7	147.1	481.1	325.2	274.2	435.2	450.4	350.3r	524.9
(15) Refined Stocks and Other (page 10)	310.0	288.3	−109.9	19.1	−102.3	82.3	−30.6	126.9	−112.3	−206.2	−159.1	16.8	59.6	60.9	−280.8	−322.3r	−307.5r	−184.2r	247.6r	167.6r	90.1
(16) Consumption of Refined (page 10)	2,376.3	1,983.6	1,878.4	2,150.2	2,050.5	2,021.0	2,237.6	2,448.3	2,203.5	1,542.3	1,997.5	2,193.2	2,421.7	2,386.0	2,058.8	2,237.1	1,834.4	1,996.8	2,339.9r	2,101.2r	2,339.0

Sources: U.S. Department of the Interior, Bureau of Mines;
U.S. Department of Commerce, Bureau of the Census.

p - preliminary r - revised

Table 1, Item 1.

Mine production of recoverable copper in the United States

COPPER CONTENT, thousands of short tons

	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986p
Arizona	739.6	501.7	628.0	801.4	917.9	820.2	908.6	927.3	858.8	813.2	1,024.4	923.8	982.6	1,046.1	848.9	1,147.3	848.3	747.6	822.8	878.1r	872.9
Michigan	73.4	58.5	74.8	75.2	67.5	56.0	67.3	72.2	67.0	73.7	43.7	42.4	38.4	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)
Missouri	3.9	3.2	5.5	12.7	12.1	8.4	11.5	10.3	12.7	14.3	11.1	11.7	11.9	14.4	15.0	9.3	8.8	8.5	6.4r	14.8r	(b)
Montana	128.1	65.5	69.5	103.3	120.4	88.6	123.1	132.5	131.1	88.0	91.1	86.2	74.2	77.0	41.6	68.9	71.6	36.8	24.1	16.6r	(b)
Nevada	78.7	50.8	77.2	104.9	106.7	96.9	101.1	93.7	84.1	81.2	58.2	67.1	22.5	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)
New Mexico	108.6	75.0	90.8	120.0	166.3	157.4	168.0	204.7	196.6	146.3	172.4	164.7	140.9	181.1	164.7	169.9	(b)	(b)	(b)	(b)	(b)
Tennessee	15.4	14.6	14.2	15.4	15.5	13.9	11.3	8.5	6.3	10.0	11.1	6.2	12.4	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)
Utah	265.4	168.6	228.2	296.7	295.7	263.5	259.5	256.6	230.6	177.2	185.5	194.1	205.4	212.8	173.9	232.9	208.4	187.1	(b)	(b)	(b)
Other States[a]	16.1	16.2	16.4	15.0	17.6	17.3	14.4	12.1	9.8	9.5	8.1	7.8	8.2	63.2	57.8	67.2	127.2	164.3	362.1r	309.4r	394.5
TOTAL	1,429.2	954.1	1,204.6	1,544.6	1,719.7	1,522.2	1,664.8	1,717.9	1,597.0	1,413.4	1,605.6	1,504.0	1,496.5	1,594.6	1,301.9	1,695.5	1,264.3	1,144.3	1,215.4r	1,218.9r	1,267.4

Sources: U.S. Department of the Interior, Bureau of Mines; ABMS.
p - preliminary r - revised
(a) - Includes California, Colorado, Idaho, Maine, Oregon, Pennsylvania & Washington.
(b) - Included In Other States.

Mine production of recoverable copper in the World

COPPER CONTENT, thousands of short tons

	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986p
Australia	122.7	101.2	120.8	144.2	173.9	195.4	204.8	242.8	277.0	241.4	240.9	244.3	244.8	261.9	268.4	255.0	270.4	288.3	260.1r	287.9r	273.9
Canada	506.1	613.3	633.3	573.2	672.7	721.5	793.3	908.2	905.4	808.9	805.7	837.1	726.9	701.5	789.7	762.0	675.2	719.8	795.6r	814.2r	846.8
Chile	701.8	727.7	724.1	758.5	762.4	780.8	790.1	810.6	994.4	913.0	1,108.0	1,162.1	1,140.0	1,171.4	1,177.2	1,191.7	1,369.3	1,386.2r	1,422.8r	1,495.2	1,413.3
China (including Mongolia)	93.7	99.2	99.2	93.7	110.2	121.3	126.8	132.3	143.3	154.3	165.3	170.9	180.8	200.3	230.4	266.5	297.6	297.6	339.5	359.3r	359.3
Japan	123.1	129.9	132.2	133.5	131.7	133.4	123.6	100.6	90.5	93.7	89.9	89.7	79.4	65.1	58.0	56.8	55.9	50.7	47.7	47.6r	38.6
Mexico	62.3	61.7	67.4	73.0	67.2	69.7	86.8	88.7	91.2	86.2	98.1	98.9	96.1	118.1	193.3	254.1	263.6	227.2	198.4r	197.2r	186.3
Papua New Guinea	—	—	—	—	—	—	136.7	201.6	202.9	190.1	194.6	201.0	218.9	188.3	161.8	182.3	187.4	201.9	181.2	192.9r	191.8
Peru	220.5	212.4	234.2	219.1	242.7	228.5	241.5	223.4	233.2	194.0	207.2	370.4	419.9	446.9	404.2	361.1	392.8	355.2	402.0r	423.9r	428.2
Philippines	81.4	95.0	121.6	144.8	176.7	217.8	235.6	243.8	248.6	248.9	261.9	300.7	290.6r	328.8	335.7	333.2r	322.0	299.2	257.5r	244.9r	239.2
Poland	17.7	19.1	28.3	53.2	91.4	134.7	148.8	167.6	203.9	253.5	289.9	310.9	343.9	374.8	378.1	324.7	414.5	443.5	475.1	476.2r	476.5
Scandinavia	62.3	64.6	71.7	87.5	84.9	88.6	100.1	124.5	110.7	118.6	129.8	133.0	135.9	127.4	119.7	129.0r	133.6r	149.6r	152.9r	153.0r	147.7
South Africa	137.5	140.5	138.5	140.1	164.5	173.6	178.5	193.8	197.4	197.2	217.0	238.2	230.7	224.0	233.6	232.1	228.3	233.5	233.7	224.8r	226.7
United States	1,429.2	954.1	1,204.6	1,544.6	1,719.7	1,522.2	1,664.8	1,717.9	1,597.0	1,413.4	1,605.6	1,504.0	1,496.5	1,594.6	1,301.9	1,695.5	1,264.3	1,144.3	1,215.4r	1,218.9r	1,267.4
USSR	671.0	767.0	791.0	839.0	887.0	949.0	988.0	1,017.0	1,017.0	1,047.2	1,080.3	1,080.3	1,069.2	1,069.2	1,080.3	1,102.3	1,113.3	1,124.4	1,124.4	1,135.4r	1,135.4
Yugoslavia	64.5	69.7	77.7	90.1	100.1	104.1	113.6	123.2	123.6	126.7	132.4	128.1	135.9	122.8	128.7	122.4	131.5	142.7	151.7	157.1r	154.0
Zaire	349.3	353.3	359.4	401.4	426.7	448.8	480.3	538.5	550.8	545.4	490.1	530.9	467.2	440.7	506.7	556.4	554.2	553.6	551.9	553.5r	528.0
Zambia	687.2	730.8	755.0	793.1	754.1	718.0	790.5	778.9	769.4	746.2	781.4	723.1	708.8	648.5	656.8	647.5	624.9	651.8r	634.9r	572.8	545.4
Other (30 countries in 1985)	328.6	331.3	347.4	336.2	359.2	389.7	434.3	517.5	546.9	544.6	544.3	535.5	474.9r	475.6r	465.4r	519.9r	609.2r	674.0r	687.4r	729.5r	722.0
TOTAL WORLD	5,658.9	5,470.8	5,906.4	6,425.2	6,925.1	6,997.1	7,638.1	8,130.9	8,303.2	7,923.3	8,442.4	8,659.1	8,460.4r	8,559.9r	8,489.9r	8,992.5r	8,908.0r	8,943.5r	9,132.2r	9,284.3r	9,180.6

Sources: United States – U.S. Department of the Interior, Bureau of Mines.
Other Countries – ABMS; Metallgesellschaft; CDA.
p - preliminary r - revised

Table 1, Item 2.

Imports and exports of copper ore in the United States

	COPPER CONTENT, thousands of short tons																				
	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986p
Imports (Ore, Concentrate, Matte)	41.9	33.0	27.6	39.1	33.8	31.3	55.0	42.9	56.0	74.0	89.6	58.0	33.2	25.2	16.5	36.0	108.1	102.8	17.1	7.7	6.0
Exports (Ore, Concentrate, Matte)	−1.4	−38.7	−65.0	−1.2	−61.5	−8.2	−19.6	−23.5	−19.3	−8.3	−14.8	−15.8	−19.3	−49.1	−117.7	−166.2	−215.2	−47.1	−67.3	−128.2	−192.2
Net Imports (Ore, Concentrate, Matte)	**40.5**	**−5.7**	**−37.4**	**37.9**	**−27.7**	**23.1**	**35.4**	**19.4**	**36.7**	**65.7**	**74.8**	**42.2**	**13.9**	**−23.9**	**−101.2**	**−130.2**	**−107.1**	**55.7**	**−50.2**	**−120.5**	**−186.2**

Source: U.S. Department of Commerce, Bureau of the Census.
p - preliminary

Table 1, Item 7.

Smelter production of copper in the United States

	COPPER CONTENT, thousands of short tons																				
	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986p
Smelter Production – Domestic Ore[a] (Table 1, Item 5)	1,353.1	841.3	1,234.7	1,547.5	1,605.2	1,470.8	1,649.1	1,705.1	1,532.1	1,374.3	1,461.3	1,394.4	1,399.9	1,447.6	1,096.2	1,427.5	1,036.8	979.0	1,091.2r	1,037.9	1,006.0
Smelter Production – Foreign Ore (Table 1, Item 5)	36.6	21.0	31.8	38.0	36.1	29.2	41.3	38.9	37.8	72.8	73.4	40.8	20.3	24.7	15.3	24.0	38.7	43.7	26.7r	2.1	–
Smelter Production – Scrap (Table 1, Item 6)	114.6	70.7	84.8	77.3	78.9	66.3	69.0	77.8	79.5	49.4	51.0	49.4	59.8	66.4	49.5	67.1	49.7	65.3	186.6r	275.4r	315.6
TOTAL SMELTER PRODUCTION	**1,504.3**	**933.0**	**1,351.3**	**1,662.8**	**1,720.2**	**1,566.3**	**1,759.4**	**1,821.8**	**1,649.4**	**1,496.5**	**1,585.7**	**1,484.6**	**1,480.0**	**1,538.7**	**1,161.0**	**1,518.6**	**1,125.2**	**1,088.0**	**1,304.5r**	**1,315.4r**	**1,321.6**

Source: U.S. Department of the Interior, Bureau of Mines.
p - preliminary r - revised
(a) For 1966, CDA used figures for refined production, rather than smelter production, from domestic ores.

Table 1, Item 8.

Imports and exports of blister copper in the United States

	COPPER CONTENT, thousands of short tons																				
	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986p
Imports of Blister Copper	349.9	269.3	270.7	237.9	224.4	156.7	157.4	154.1	207.8	88.9	43.8	44.7	81.4	75.1	51.8	81.3	114.0	87.6	66.3	31.4r	51.0
Exports of Blister Copper	−0.7	−21.0	−15.7	−4.3	−7.8	−28.7	−8.5	−7.5	−2.7	−1.5	−2.7	−16.4	−11.4	−8.2	−4.2	−10.2	−2.2	−8.2	−9.2	−19.8	−17.6
Net Imports of Blister Copper	**349.2**	**248.3**	**255.0**	**233.6**	**216.6**	**128.0**	**148.9**	**146.6**	**205.1**	**87.4**	**41.1**	**28.3**	**70.0**	**66.9**	**47.6**	**71.1**	**111.8**	**79.4**	**57.1**	**11.6r**	**33.4**

Source: U.S. Department of Commerce, Bureau of the Census.
p - preliminary r - revised

Table 1, Item 10.

Blister stocks and other

	COPPER CONTENT, thousands of short tons																				
	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986p
End-of-Year Blister Copper Stocks	270.0	220.0	272.0	291.0	340.0	303.0	282.0	265.0	324.0	312.0	321.0	346.0	290.0	303.1	299.8	305.3	256.8	191.8	270.1r	160.9r	148.8
Net Change[(a)]	24.0	−50.0	52.0	19.0	49.0	−37.0	−21.0	−17.0	59.0	−12.0	9.0	25.0	−56.0	13.1	−3.3	5.5	−48.5	−65.0	78.3r	−109.2r	−12.1
Apparent Change[(b)]	27.9	−22.4	84.1	76.3	92.8	36.2	−33.9	22.1	120.3	91.1	36.5	−32.7	−107.1	−131.2	−175.6	−179.4	−165.0r	−200.9	−108.8r	−113.7r	−141.5

Sources: U.S. Department of the Interior, Bureau of Mines; ABMS.
p - preliminary r - revised
(a) - Net Change — the year-to-year increase (+) or decrease (−) of blister copper stocks as reported.
(b) - Apparent Change — the difference between Lines 9 & 11 in Table 1, required to rationalize the CDA flow sheet. Factors other than changes in stocks are included in the apparent change. The sign of the data (+ or −) is opposite that shown in Table 1.

Table 1, Item 13.

Production of refined copper in the United States

	COPPER CONTENT, thousands of short tons																				
	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986p
Refined Production - Primary Sources (Table 1, Items 1, 2, 4, 8 & 10)	1,711.0	1,133.0	1,437.4	1,742.8	1,765.1	1,591.8	1,873.2	1,868.5	1,654.7	1,443.4	1,539.3	1,496.2	1,597.3	1,670.4	1,334.7	1,702.0	1,352.3r	1,303.0	1,283.8r	1,165.3r	1,180.9
Refined Production - Scrap at Smelters (Table 1, Item 6)	114.6	70.7	84.8	77.3	78.9	66.3	69.0	77.8	79.5	49.4	51.0	49.4	59.8	66.4	49.5	67.1	49.7	65.3	186.6r	275.4r	315.6
Refined Production - Scrap at Refiners (Table 1, Item 12)	357.7	322.9	316.8	394.8	398.7	304.3	316.3	366.3	404.4	282.1	300.2	303.0	362.3	441.2	474.3	465.1r	465.7r	377.5r	171.5r	142.6r	227.5
TOTAL REFINED PRODUCTION	**2,183.3**	**1,526.6**	**1,839.0**	**2,214.9**	**2,242.7**	**1,962.4**	**2,258.5**	**2,312.6**	**2,138.6**	**1,774.9**	**1,890.5**	**1,848.6**	**2,019.4**	**2,178.0**	**1,858.5**	**2,234.2r**	**1,867.7r**	**1,745.8r**	**1,641.9r**	**1,583.3r**	**1,724.0**

Sources: U.S. Department of the Interior, Bureau of Mines; U.S. Department of Commerce, Bureau of the Census; ABMS.
p - preliminary r - revised

Table 1, Item 14.

Imports and exports of refined copper in the United States

	COPPER CONTENT, thousands of short tons																				
	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986p
Imports of Refined Copper	162.6	330.3	400.3	131.2	132.1	164.0	192.4	199.9	303.9	146.0	380.7	390.8	455.8	237.2	505.0	391.2	313.9	532.4	555.9	420.1r	542.0
Exports of Refined Copper	−279.6	−161.6	−251.0	−215.0	−222.0	−187.7	−182.7	−191.1	−126.7	−172.4	−114.6	−63.0	−113.1	−90.1	−23.9	−66.0	−39.7	−97.2	−105.5	−69.8	−17.1
Net Imports of Refined Copper	**−117.0**	**168.7**	**149.3**	**−83.8**	**−89.9**	**−23.7**	**9.7**	**8.8**	**177.2**	**−26.4**	**266.1**	**327.8**	**342.7**	**147.1**	**481.1**	**325.2**	**274.2**	**435.2**	**450.4**	**350.3r**	**524.9**

Source: U.S. Department of Commerce, Bureau of the Census.
p - preliminary r - revised

Table 1, Item 15.

Refined stocks and other

	COPPER CONTENT, thousands of short tons																				
	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986p
End-of-Year Refined Copper Stocks at:																					
Refineries	61.6	41.7	44.9	41.9	142.7	82.7	99.6	43.2	151.6	260.7	272.8	286.7	188.3	78.4	73.4	151.0	210.1	66.1	193.4	150.4	145.1
Wire Rod Mills	80.0	47.0	54.0	63.0	134.0	120.0	75.0	61.0	131.0	140.0	133.0	116.3	69.7	48.7	54.6	120.3	137.8	127.9	147.7r	103.6r	68.3
Brass Mills	84.0	51.0	57.0	56.0	49.0	50.0	35.0	43.0	42.0	33.0	39.0	34.2	30.7	27.0	24.5	29.2	28.0	28.7	29.8	22.0r	15.4
Other Processors	10.0	5.0	4.0	6.0	4.0	6.0	5.4	5.6	6.9	6.1	7.0	7.0	7.5	10.4	11.3	9.4	8.4	9.2	8.1r	8.1r	8.8
Government	452.4	275.2	261.4	253.4	253.4	251.6	226.6	217.8	35.3	26.2	42.1	22.6	22.5	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3
Commodity Exchange	4.1	13.7	11.7	4.0	17.9	20.3	57.8	5.9	43.3	100.0	201.0	184.4	179.6	107.9	179.6	187.6	274.5	409.2	276.3	120.3	93.3
End-of-Year Total	**692.1**	**433.6**	**433.0**	**424.3**	**601.0**	**530.6**	**499.4**	**376.5**	**410.1**	**566.0**	**694.9**	**651.2**	**498.3**	**294.7**	**365.7**	**519.8**	**681.1**	**663.4**	**677.6r**	**426.7r**	**353.2**
Net Change[a]	−379.1	−258.5	−0.6	−8.7	176.7	−70.4	−31.2	−122.9	33.6	155.9	128.9	−43.7	−152.9	−203.6	71.0	154.1	161.3	−17.7	14.2r	−250.9r	−73.5
Apparent Change[b]	−310.0	−288.3	109.9	−19.1	102.3	−82.3	30.6	−126.9	112.3	206.2	159.1	−16.8	−59.6	−60.9	280.8	322.3r	307.5r	184.2r	−247.6r	−167.6r	−90.1

Sources: U.S. Department of the Interior, Bureau of Mines; ABMS.
p - preliminary r - revised
(a) - Net Change — the year-to year increase (+) or decrease (−) of refined copper stocks as reported.
(b) - Apparent Change — the difference between Line 16 and the sum of Lines 13 & 14 in Table 1, required to rationalize the CDA flow sheet. Factors other than changes in stocks are included in the apparent change. The sign of the data (+ or −) is opposite that shown in Table 1.

Table 1, Item 16.

Consumption of refined copper in the United States

	COPPER CONTENT, thousands of short tons																				
	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986p
Consumption of Refined Copper by:																					
Wire Rod Mills	1,376.0	1,274.0	1,186.0	1,295.0	1,338.7	1,324.9	1,526.3	1,672.3	1,474.3	1,061.3	1,364.0	1,511.2	1,672.7	1,653.0	1,442.8	1,597.9	1,359.0	1,399.8	1,658.6r	1,519.6r	1,636.6
Brass Mills	939.7	658.9	653.6	799.1	660.6	655.8	667.2	714.4	670.2	439.0	584.8	628.6	682.6	672.6	564.0	591.1	433.4	551.4	635.1r	535.0r	654.9
Ingot Makers	17.7	8.6	5.7	6.7	6.8	4.5	6.0	6.1	9.2	4.5	7.5	6.6	8.2	6.9	5.5	6.0	4.8	4.9	7.6r	5.9r	5.8
Foundries	21.4	22.2	14.9	23.8	23.7	17.5	17.9	30.6	28.7	21.7	21.0	22.5	22.1	19.9	18.2	17.7	15.1	15.6	17.7r	15.9r	16.2
Powder Plants	13.1	6.5	7.7	9.8	6.5	7.2	9.5	12.7	12.0	6.8	11.8	11.3	11.5	11.6	8.3	8.3	7.5	8.5	8.7r	8.1r	7.9
Other Industries[a]	8.4	13.4	10.5	15.8	14.2	11.1	10.7	12.2	9.1	9.0	8.4	13.0	24.6	22.0	20.0	16.1	14.6	16.6	12.2r	16.7r	17.6
TOTAL REFINED CONSUMPTION	2,376.3	1,983.6	1,878.4	2,150.2	2,050.5	2,021.0	2,237.6	2,448.3	2,203.5	1,542.3	1,997.5	2,193.2	2,421.7	2,386.0	2,058.8	2,237.1	1,834.4	1,996.8	2,339.9r	2,101.2r	2,339.0

Sources: U.S. Department of the Interior, Bureau of Mines; U.S. Department of Commerce, Bureau of the Census; ABMS.
p - preliminary r - revised
(a) - Chemical, steel, aluminum and other industries.

Table 2

Supply of secondary copper from receipt to consumption by brass mills, ingot makers, foundries, powder plants and other industries

COPPER CONTENT, thousands of short tons

	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986p
(1) Receipts of Domestic Scrap	1,468.5	1,309.3	1,368.2	1,552.8	1,447.6	1,334.9	1,440.8	1,560.9	1,504.3	1,113.0	1,271.1	1,318.4	1,426.9	1,661.6	1,541.8	1,553.4r	1,317.1r	1,302.8r	1,371.7r	1,491.2r	1,518.3
(2) Net Scrap Exports (page 12)[a]	−18.1	−45.1	−76.6	−46.9	−79.0	−50.7	−39.2	−81.4	−70.5	−84.3	−54.1	−58.5	−95.9	−100.7	−120.8	−80.0	−81.8	−45.9	−98.8	−193.6	−189.0
(3) Scrap Stocks (page 12)	−5.0	−18.0	32.0	−15.0	−13.0	17.0	7.0	−2.0	−3.0	5.0	−19.0	−10.9	22.7	−10.6	12.1	−10.0	9.2	7.3	9.2	−23.5r	22.8
(4) Recovery From Copper-Base Scrap (page 13)	1,445.4	1,246.2	1,323.6	1,490.9	1,355.6	1,301.2	1,408.6	1,477.5	1,430.8	1,033.7	1,198.0	1,249.0	1,353.7	1,550.3	1,433.1	1,463.4r	1,244.5r	1,264.2r	1,282.1r	1,274.1r	1,352.1
(5) Recovery From Other Scrap (page 13)	16.9	16.4	16.0	19.0	16.8	17.0	19.7	21.1	21.1	28.1	35.7	37.9	39.8	42.5	38.9	42.9r	40.6r	42.7r	43.2r	43.0r	45.9
(6) Total Scrap Recovery (page 13)	1,462.3	1,262.6	1,339.6	1,509.9	1,372.4	1,318.2	1,428.3	1,498.6	1,451.9	1,061.8	1,233.7	1,286.9	1,393.5	1,592.8	1,472.0	1,506.3r	1,285.1r	1,306.9r	1,325.3r	1,317.1r	1,398.0
(7) Smelter Production From Scrap	−114.6	−70.7	−84.8	−77.3	−78.9	−66.3	−69.0	−77.8	−79.5	−49.4	−51.0	−49.4	−59.8	−66.4	−49.5	−67.1	−49.7	−65.3	−186.6r	−275.4r	−315.6
(8) Refined Production From Scrap	−357.7	−322.9	−316.8	−394.8	−398.7	−304.3	−316.3	−366.3	−404.4	−282.1	−300.2	−303.0	−362.3	−441.2	−474.3	−465.1r	−465.7r	−377.5r	−171.5r	−142.6r	−227.5
(9) Consumption of Scrap (page 13)	990.0	869.0	938.0	1,037.8	894.8	947.6	1,043.0	1,054.5	968.0	730.3	882.5	934.5	971.4	1,085.2	948.2	974.1	769.7	864.1	967.2r	899.1r	854.9

Sources: U.S. Department of the Interior, Bureau of Mines; U.S. Department of Commerce, Bureau of the Census; ABMS.

p - preliminary r - revised

(a) - Negative (−) signs denote net exports.

Table 2, Item 2.

Imports and exports of copper-base scrap in the United States

	COPPER CONTENT, thousands of short tons																				
	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986p
Imports of Copper-Base Scrap	31.7	11.4	12.5	7.7	3.8	13.8	18.8	27.1	41.7	20.2	29.4	28.6	28.8	32.0	32.5	38.8	38.8	60.1	59.6	50.9	61.6
Exports of Copper-Base Scrap	−49.8	−56.5	−89.1	−54.6	−82.8	−64.5	−58.0	−108.5	−112.2	−104.5	−83.5	−87.1	−124.7	−132.7	−153.3	−118.8	−120.6	−106.0	−158.4	−244.5	−250.6
Net Exports of Copper-Base Scrap[(a)]	**−18.1**	**−45.1**	**−76.6**	**−46.9**	**−79.0**	**−50.7**	**−39.2**	**−81.4**	**−70.5**	**−84.3**	**−54.1**	**−58.5**	**−95.9**	**−100.7**	**−120.8**	**−80.0**	**−81.8**	**−45.9**	**−98.8**	**−193.6**	**−189.0**

Sources: U.S. Department of Commerce, Bureau of the Census; ABMS.
p - preliminary
(a) - The negative (−) sign for each year is used to be consistent with the convention used in Tables 1, 2 and 4 — namely that imports are **additions** to the domestic flow, and therefore (+), while exports are **subtractions** from the flow, and therefore (−).

Table 2, Item 3.

Copper-base scrap stocks

	COPPER CONTENT, thousands of short tons																				
	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986p
Scrap Copper-Base Stocks at:																					
Brass Mills	44.0	61.0	39.0	39.0	43.0	37.0	36.0	44.0	45.0	46.0	48.0	54.7	44.4	45.6	44.9	39.7	45.6	39.8	40.3	30.9r	32.9
Secondary Smelters	23.0	26.0	22.0	21.0	19.0	24.0	22.0	23.0	24.0	27.0	28.0	33.2	26.0	30.1	30.5	41.7	23.7	18.0	23.5	68.9r	46.8
Primary Producers	29.0	22.0	20.0	36.0	49.0	27.0	24.0	19.0	18.0	12.0	25.0	27.7	22.1	27.5	16.6	19.1	23.7	28.2	14.3		
Foundries	8.0	13.0	10.0	10.0	8.0	14.0	13.0	11.0	13.0	11.0	13.0	11.3	10.8	10.7	9.9	11.1	9.8	9.5	8.5	9.9r	7.8
Other Processors	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.0	4.0	2.0	2.9	2.9	2.8	3.1	2.7	2.7	2.4	2.8r	2.2
End-of-Year Total	**109.0**	**127.0**	**95.0**	**110.0**	**123.0**	**106.0**	**99.0**	**101.0**	**104.0**	**99.0**	**118.0**	**128.9**	**106.2**	**116.8**	**104.7**	**114.7**	**105.5**	**98.2**	**89.0**	**112.5r**	**89.7**
Net Change[(a)]	5.0	18.0	−32.0	15.0	13.0	−17.0	−7.0	2.0	3.0	−5.0	19.0	10.9	−22.7	10.6	−12.1	10.0	−9.2	−7.3	−9.2	23.5r	−22.8

Sources: U.S. Department of the Interior, Bureau of Mines; ABMS.
p - preliminary r - revised
(a) - Net Change — the year-to-year increase (+) or decrease (−) of stocks as reported. The sign of the data (+ or −) is opposite that shown in Table 2.

Table 2, Item 6.

Recovery of copper from scrap

	COPPER CONTENT, thousands of short tons																				
	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986p
Copper Recovered From Copper-Base Scrap																					
New Scrap	818.3	673.7	719.9	804.9	734.2	752.5	854.4	901.9	864.2	593.6	716.1	731.2	790.4	947.0	828.6	859.7r	687.3r	708.7r	719.9r	713.2r	683.2
Old Scrap	627.1	572.5	603.7	686.0	621.4	548.7	554.2	575.6	566.6	440.1	481.9	517.8	563.3	603.3	604.5	603.7r	557.2r	555.5r	562.2r	560.9r	668.9
Total (Table 2, Item 4)	1,445.4	1,246.2	1,323.6	1,490.9	1,355.6	1,301.2	1,408.6	1,477.5	1,430.8	1,033.7	1,198.0	1,249.0	1,353.7	1,550.3	1,433.1	1,463.4r	1,244.5r	1,264.2r	1,282.1r	1,274.1r	1,352.1
Copper Recovered From Scrap Other Than Copper-Base																					
New Scrap	10.1	10.2	10.7	12.9	11.5	10.7	13.0	14.3	14.0	17.4	20.7	21.9	22.9	24.5	22.5	25.6r	22.6r	22.6r	22.9r	22.7r	21.8
Old Scrap	6.8	6.2	5.3	6.1	5.3	6.3	6.7	6.8	7.1	10.7	15.0	16.0	16.9	18.0	16.4	17.3r	18.0r	20.1	20.3r	20.3r	24.1
Total (Table 2, Item 5)	16.9	16.4	16.0	19.0	16.8	17.0	19.7	21.1	21.1	28.1	35.7	37.9	39.8	42.5	38.9	42.9r	40.6r	42.7r	43.2r	43.0r	45.9
Copper Recovered From All Scrap																					
New Scrap	828.4	683.9	730.6	817.8	745.7	763.2	867.4	916.2	878.2	611.0	736.8	753.1	813.3	971.5	851.1	885.3r	709.9r	731.3r	742.8r	735.9r	705.0
Old Scrap	633.9	578.7	609.0	692.1	626.7	555.0	560.9	582.4	573.7	450.8	496.9	533.8	580.2	621.3	620.9	621.0r	575.2r	575.5r	582.5r	581.2r	693.0
Total Copper Recovered (Table 2, Item 6)	1,462.3	1,262.6	1,339.6	1,509.9	1,372.4	1,318.2	1,428.3	1,498.6	1,451.9	1,061.8	1,233.7	1,286.9	1,393.5	1,592.8	1,472.0	1,506.3r	1,285.1r	1,306.9r	1,325.3r	1,317.1r	1,398.0

Sources: U.S. Department of the Interior, Bureau of Mines, ABMS.
p - preliminary r - revised

Table 2, Item 9.

Consumption of copper scrap in the United States

	COPPER CONTENT, thousands of short tons																				
	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986p
Consumption of Copper Scrap by:																					
Brass Mills	485.7	406.9	475.9	516.6	446.5	496.6	578.4	612.5	563.0	406.3	519.3	531.9	541.7	608.0	532.3	559.3	448.2	540.9	583.8	544.1r	498.7
Ingot Makers	293.0	271.9	278.8	290.3	241.4	257.9	250.5	236.7	215.0	164.0	173.0	195.0	205.5	238.2	214.0	213.0	173.2	176.4	219.5r	202.4r	199.7
Foundries	144.0	133.6	126.6	147.4	129.7	113.4	121.7	122.7	115.4	90.9	95.7	101.2	105.2	113.0	87.0	84.7	72.1	74.3	84.2r	78.7r	79.9
Powder Plants	15.3	16.1	18.1	16.5	12.2	16.5	16.0	17.3	17.7	11.6	16.8	18.3	18.5	18.1	12.8	12.9	10.1	13.2	13.1r	12.2r	11.9
Other Industries[a]	52.0	40.5	38.6	67.0	65.0	63.2	76.4	65.3	56.9	57.5	77.7	88.1	100.5	107.9	102.1	104.2	66.1	59.3	66.6r	61.7r	64.7
TOTAL COPPER CONSUMED	990.0	869.0	938.0	1,037.8	894.8	947.6	1,043.0	1,054.5	968.0	730.3	882.5	934.5	971.4	1,085.2	948.2	974.1	769.7	864.1	967.2r	899.1r	854.9

Sources: U.S. Department of the Interior, Bureau of Mines; U.S. Department of Commerce, Bureau of the Census; ABMS.
p - preliminary r - revised
(a) - Chemical, steel, aluminum and other industries.

Table 3

Consumption of metals by wire rod mills, brass mills, ingot makers, foundries, powder plants and other industries

	METAL CONTENT, thousands of short tons																				
	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986p
(1) Consumption of Refined Copper (Table 1, Item 16)	2,376.3	1,983.6	1,878.4	2,150.2	2,050.5	2,021.0	2,237.6	2,448.3	2,203.5	1,542.3	1,997.5	2,193.2	2,421.7	2,386.0	2,058.8	2,237.1	1,834.4	1,996.8	2,339.9r	2,101.2r	2,339.0
(2) Consumption of Copper in Scrap (Table 2, Item 9)	990.0	869.0	938.0	1,037.8	894.8	947.6	1,043.0	1,054.5	968.0	730.3	882.5	934.5	971.4	1,085.2	948.2	974.1	769.7	864.1	967.2r	899.1r	854.9
(3) Total Copper Consumed (page 15)	**3,366.3**	**2,852.6**	**2,816.4**	**3,188.0**	**2,945.3**	**2,968.6**	**3,280.6**	**3,502.8**	**3,171.5**	**2,272.6**	**2,880.0**	**3,127.7**	**3,393.1**	**3,471.2**	**3,007.0**	**3,211.2**	**2,604.1**	**2,860.9**	**3,307.1r**	**3,000.3r**	**3,193.9**
(4) Consumption of Zinc	356.0	274.7	327.1	376.3	288.1	316.3	387.0	381.0	347.2	234.7	323.1	328.8	347.8	358.9	298.1	313.7	246.6	302.1	344.4r	284.0r	295.1
(5) Consumption of Lead	39.5	30.9	31.7	33.7	27.4	25.6	26.1	28.8	28.1	19.7	26.0	30.0	30.1	30.8	25.7	26.0	22.4	25.3	29.0r	25.8r	26.0
(6) Consumption of Tin	23.1	19.7	19.3	19.4	15.9	15.2	22.6	16.3	16.2	11.7	14.4	16.7	16.4	16.4	14.2	14.5	11.7	12.4	14.5	14.0	14.6
(7) Consumption of Nickel	12.6	10.8	6.6	10.1	10.3	11.5	11.2	17.2	12.0	12.0	9.7	8.1	7.4	11.2	10.6	14.3	5.8	8.9	8.8r	6.1r	6.1
(8) Total Alloying Metal Consumed (page 16)	**431.2**	**336.1**	**384.7**	**439.5**	**341.7**	**368.6**	**446.9**	**443.3**	**403.5**	**278.1**	**373.2**	**383.6**	**401.7**	**417.3**	**348.6**	**368.5**	**286.5**	**348.7**	**396.7r**	**329.9r**	**341.8**
(9) Total Metal Consumed	**3,797.5**	**3,188.7**	**3,201.1**	**3,627.5**	**3,287.0**	**3,337.2**	**3,727.5**	**3,946.1**	**3,575.0**	**2,550.7**	**3,253.2**	**3,511.3**	**3,794.8**	**3,888.5**	**3,355.6**	**3,579.7**	**2,890.6**	**3,209.6**	**3,703.8r**	**3,330.2r**	**3,535.7**
(10) Ingot Consumed (page 17)[a]	342.0	323.9	326.5	336.6	256.8	276.4	301.3	300.0	284.7	194.3	236.5	258.2	256.6	266.2	235.6	239.6	191.8	197.5	207.5	185.7r	186.2
(11) Ingot Stocks & Other (page 17)[a,b]	−65.1	−31.6	−37.8	−43.6	−55.9	−56.6	−32.1	−10.9	−7.2	−24.7	−7.2	−14.2	−21.4	−44.0	−41.2	−43.0	−41.1	−46.1	−93.4r	−94.3r	−90.0
(12) Net Metal Consumed (page 17)	**3,742.4**	**3,157.1**	**3,163.3**	**3,583.9**	**3,231.1**	**3,280.6**	**3,695.4**	**3,935.2**	**3,567.8**	**2,526.0**	**3,246.0**	**3,497.1**	**3,773.4**	**3,844.5**	**3,314.4**	**3,536.7**	**2,849.5**	**3,163.5**	**3,610.4r**	**3,235.9r**	**3,445.7**
(13) Wire Rod Mills - Net Metal Consumed (page 17)	1,376.0	1,274.0	1,186.0	1,295.0	1,338.7	1,324.9	1,526.3	1,672.3	1,474.3	1,061.3	1,364.0	1,511.2	1,672.7	1,653.0	1,442.8	1,597.9	1,359.0	1,399.8	1,658.6r	1,519.6r	1,636.6
(14) Wire Rod & Wire Mills - Metal Stocks & Oth	−129.0	−96.0	−79.5	−33.0	−116.7r	−68.4r	−169.8r	−206.3r	−147.8r	−22.3r	−155.0r	−76.2r	−161.7r	−102.0r	−49.8r	−156.4r	−38.0r	−66.8r	−146.6r	−50.6r	−183.1
(15) Wire Mills - Metal Contained in Products Supplied (Table 4, Item 10)	1,247.0	1,178.0	1,106.5	1,262.0	1,222.0r	1,256.5r	1,356.5r	1,466.0r	1,326.5r	1,039.0r	1,209.0r	1,435.0r	1,511.0r	1,551.0r	1,393.0r	1,441.5r	1,321.0r	1,333.0r	1,512.0r	1,469.0r	1,453.5
(16) Brass Mills - Net Metal Consumed (page 17)	1,753.9	1,312.8	1,421.2	1,657.3	1,371.4	1,448.5	1,615.4	1,700.2	1,577.6	1,067.2	1,407.3	1,464.6	1,549.6	1,619.3	1,380.6	1,461.1	1,116.4	1,383.3	1,545.7r	1,337.9r	1,427.1
(17) Brass Mills - Metal Stocks & Other	−91.4	−14.8	−43.2	−102.3	−118.4	−106.5	−111.4	−63.7	−167.1	−36.2	−113.3	−91.6	−95.1	−97.3	−114.1	−146.1r	98.9r	−193.3r	−178.2r	−129.9r	−186.1
(18) Brass Mills - Metal Contained in Products Supplied (Table 4, Item 16)	1,662.5	1,298.0	1,378.0	1,555.0	1,253.0	1,342.0	1,504.0	1,636.5	1,410.5	1,031.0	1,294.0	1,373.0	1,454.5	1,522.0	1,266.5	1,315.0r	1,017.5r	1,190.0r	1,367.5r	1,208.0r	1,241.0
(19) Foundries - Net Metal Consumed (page 17)	470.3	419.4	422.6	468.1	378.0	364.6	394.0	404.9	380.3	276.0	299.4	326.2	346.2	353.5	297.5	292.4	235.7	243.9	262.2r	237.0r	238.6
(20) Foundries - Metal Stocks & Other	−5.3	−8.4	−17.6	−28.6	13.0	1.9	−2.0	5.1	−14.3	39.5r	3.6	−5.2	−15.2	9.5	−11.5r	−10.4r	−13.7	5.1r	−10.2r	−2.0r	−0.1
(21) Foundries - Metal Contained in Products Supplied (Table 4, Item 17)	465.0	411.0	405.0	439.5	391.0	366.5	392.0	410.0	366.0	315.5r	303.0	321.0	331.0	363.0	286.0r	282.0r	222.0	249.0r	252.0r	235.0r	238.5
(22) Powder Plants - Net Metal Consumed (page 17)	38.7	34.1	37.1	38.0	29.7	32.3	34.6	41.3	36.6	21.8	34.4	36.5	37.4	36.6	26.0	26.1	21.7	26.8	27.5r	25.0r	24.5
(23) Powder Plants - Metal Stocks & Other	−5.2	−6.1	−6.1	−7.5	−6.2	−6.3	−7.6	−9.3	−2.1	1.2	−1.9	−4.5	−9.4	−9.6	−7.0	−4.1	−4.7	−7.3	−6.0r	−6.5r	−7.0
(24) Powder Plants - Metal Contained in Products Supplied (Table 4, Item 18)	33.5	28.0	31.0	30.5	23.5	26.0	27.0	32.0	34.5	23.0	32.5	32.0	28.0	27.0	19.0	22.0	17.0	19.5	21.5	18.5	17.5
(25) Other Industries - Net Metal Consumed (page 17)[c]	103.5	116.8	96.4	125.5	113.3	110.3	125.1	116.5	99.0	99.7	140.9	158.6	167.5	182.1	167.5	159.2	116.7	109.7	116.4r	116.4r	118.9

Sources: U.S. Department of the Interior, Bureau of Mines; ABMS.
p - preliminary r - revised
(a) - Ingot makers consume refined copper, scrap copper and alloying metal, and ship to foundries, brass mills, powder plants and other industries.
(b) - The difference between the copper and alloying metal consumed by ingot makers and the ingot consumed by the customers of the ingot makers. This difference consists of melting and other losses in producing ingot, stock changes, and other factors.
(c) - Chemical, steel, aluminum and other industries.

Table 3, Item 3.

Consumption of copper by wire rod mills, brass mills, ingot makers, foundries, powder plants and other industries

	COPPER CONTENT, thousands of short tons																				
	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986p
Consumption of Copper by:																					
Wire Rod Mills – Refined	1,376.0	1,274.0	1,186.0	1,295.0	1,338.7	1,324.9	1,526.3	1,672.3	1,474.3	1,061.3	1,364.0	1,511.2	1,672.7	1,653.0	1,442.8	1,597.9	1,359.0	1,399.8	1,658.6r	1,519.6r	1,636.6
Brass Mills[a]																					
Refined	939.7	658.9	653.6	799.1	660.6	655.8	667.2	714.4	670.2	439.0	584.8	628.6	682.6	672.6	564.0	591.1	433.4	551.4	635.1r	535.0r	654.9
Scrap	485.7	406.9	475.9	516.6	446.5	496.6	578.4	612.5	563.0	406.3	519.3	531.9	541.7	608.0	532.3	559.3	448.2	540.9	583.8	544.1r	498.7
Total	1,425.4	1,065.8	1,129.5	1,315.7	1,107.1	1,152.4	1,245.6	1,326.9	1,233.2	845.3	1,104.1	1,160.5	1,224.3	1,280.6	1,096.3	1,150.4	881.6	1,092.3	1,218.9r	1,079.1r	1,153.6
Ingot Makers[b]																					
Refined	17.7	8.6	5.7	6.7	6.8	4.5	6.0	6.1	9.2	4.5	7.5	6.6	8.2	6.9	5.5	6.0	4.8	4.9	7.6r	5.9r	5.8
Scrap	293.0	271.9	278.8	290.3	241.4	257.9	250.5	236.7	215.0	164.0	173.0	195.0	205.5	238.2	214.0	213.0	173.2	176.4	219.5r	202.4r	199.7
Total	310.7	280.5	284.5	297.0	248.2	262.4	256.5	242.8	224.2	168.5	180.5	201.6	213.7	245.1	219.5	219.0	178.0	181.3	227.1r	208.3r	205.5
Foundries[a]																					
Refined	21.4	22.2	14.9	23.8	23.7	17.5	17.9	30.6	28.7	21.7	21.0	22.5	22.1	19.9	18.2	17.7	15.1	15.6	17.7r	15.9r	16.2
Scrap	144.0	133.6	126.6	147.4	129.7	113.4	121.7	122.7	115.4	90.9	95.7	101.2	105.2	113.0	87.0	84.7	72.1	74.3	84.2r	78.7r	79.9
Total	165.4	155.8	141.5	171.2	153.4	130.9	139.6	153.3	144.1	112.6	116.7	123.7	127.3	132.9	105.2	102.4	87.2	89.9	101.9r	94.6r	96.1
Powder Plants[a]																					
Refined	13.1	6.5	7.7	9.8	6.5	7.2	9.5	12.7	12.0	6.8	11.8	11.3	11.5	11.6	8.3	8.3	7.5	8.5	8.7r	8.1r	7.9
Scrap	15.3	16.1	18.1	16.5	12.2	16.5	16.0	17.3	17.7	11.6	16.8	18.3	18.5	18.1	12.8	12.9	10.1	13.2	13.1r	12.2r	11.9
Total	28.4	22.6	25.8	26.3	18.7	23.7	25.5	30.0	29.7	18.4	28.6	29.6	30.0	29.7	21.1	21.2	17.6	21.7	21.8r	20.3r	19.8
Other Industries[a,c]																					
Refined	8.4	13.4	10.5	15.8	14.2	11.1	10.7	12.2	9.1	9.0	8.4	13.0	24.6	22.0	20.0	16.1	14.6	16.6	12.2r	16.7r	17.6
Scrap	52.0	40.5	38.6	67.0	65.0	63.2	76.4	65.3	56.9	57.5	77.7	88.1	100.5	107.9	102.1	104.2	66.1	59.3	66.6r	61.7r	64.7
Total	60.4	53.9	49.1	82.8	79.2	74.3	87.1	77.5	66.0	66.5	86.1	101.1	125.1	129.9	122.1	120.3	80.7	75.9	78.8r	78.4r	82.3
All Industries																					
Refined (Table 1, Item 16)	**2,376.3**	**1,983.6**	**1,878.4**	**2,150.2**	**2,050.5**	**2,021.0**	**2,237.6**	**2,448.3**	**2,203.5**	**1,542.3**	**1,997.5**	**2,193.2**	**2,421.7**	**2,386.0**	**2,058.8**	**2,237.1**	**1,834.4**	**1,996.8**	**2,339.9r**	**2,101.2r**	**2,339.0**
Scrap (Table 2, Item 9)	**990.0**	**869.0**	**938.0**	**1,037.8**	**894.8**	**947.6**	**1,043.0**	**1,054.5**	**968.0**	**730.3**	**882.5**	**934.5**	**971.4**	**1,085.2**	**948.2**	**974.1**	**769.7**	**864.1**	**967.2r**	**899.1r**	**854.9**
TOTAL COPPER CONSUMED (Table 3, Item 3)	**3,366.3**	**2,852.6**	**2,816.4**	**3,188.0**	**2,945.3**	**2,968.6**	**3,280.6**	**3,502.8**	**3,171.5**	**2,272.6**	**2,880.0**	**3,127.7**	**3,393.1**	**3,471.2**	**3,007.0**	**3,211.2**	**2,604.1**	**2,860.9**	**3,307.1r**	**3,000.3r**	**3,193.9**

Sources: U.S. Department of the Interior, Bureau of Mines; ABMS.

p - preliminary r - revised

(a) - Direct consumption only; not including consumption of copper in ingots from ingot makers.

(b) - Ingot makers consume refined copper, scrap copper and alloying metal, and ship to foundries, brass mills, powder plants and other industries.

(c) - Chemical, steel, aluminum and other industries.

Table 3, Item 8.

Consumption of alloying metal by brass mills, ingot makers, foundries and powder plants

	ALLOYING METAL CONTENT, thousands of short tons																				
	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986p
Consumption of Alloying Metal by:																					
Brass Mills[a]																					
Zinc-Slab	169.3	116.9	145.9	158.7	112.2	134.8	177.4	183.6	167.6	104.8	153.1	154.5	162.2	167.0	138.0	147.9	111.7	130.6	151.5	120.1r	124.8
Zinc in Scrap	129.9	108.9	126.7	156.6	128.8	129.8	156.2	149.2	132.6	94.7	124.5	125.5	139.8	147.3	122.1	122.3	98.9	128.0	140.9r	113.1r	120.9
Lead-Refined	3.9	2.3	2.8	3.7	2.5	3.1	3.8	4.9	4.1	2.0	3.5	3.3	3.7	3.9	2.7	2.8	1.6	3.2	2.6	1.3	1.6
Lead in Scrap	5.3	2.9	3.6	4.7	3.2	2.9	3.6	3.6	3.3	2.3	3.4	4.5	3.8	4.0	3.3	3.1	2.4	3.4	4.1r	3.0r	3.2
Tin-Refined	1.5	1.2	1.2	1.5	1.2	1.1	1.0	1.1	1.1	0.6	0.8	0.7	0.8	0.8	0.8	0.8	0.4	0.5	0.6	0.8	1.5
Tin in Scrap	0.4	0.5	0.5	0.7	0.5	0.4	0.5	0.5	0.5	0.3	0.3	0.6	0.5	0.5	0.4	0.3	0.4	0.5	0.5	0.3r	0.3
Nickel-Refined	5.2	3.6	3.4	5.9	5.1	6.1	6.5	5.4	7.1	7.5	5.5	4.6	4.8	7.6	8.4	11.3	3.5	5.3	5.2	3.5	3.4
Nickel in Scrap	6.4	6.3	2.4	3.3	4.6	4.7	4.1	10.5	4.2	4.1	3.8	3.1	2.2	3.1	1.8	2.6	1.9	3.2	3.1r	2.1r	2.2
Total	321.9	242.6	286.5	335.1	258.1	282.9	353.1	358.8	320.5	216.3	294.9	296.8	317.8	334.2	277.5	291.1	220.8	274.7	308.5r	244.2r	257.9
Ingot Makers																					
Zinc-Slab	9.4	8.1	12.2	13.6	9.9	10.4	7.1	6.9	8.2	6.6	7.7	8.3	7.3	7.5	18.9	22.2	14.6	18.1	21.4	20.8r	20.5
Zinc in Scrap	35.2	31.3	32.8	34.5	26.7	31.2	33.9	29.4	28.2	20.8	26.8	29.1	25.0	25.2	9.9	12.2	14.2	17.6	20.9r	20.3r	20.0
Lead in Scrap	23.6	20.1	19.9	20.1	16.1	16.8	16.2	18.0	18.1	13.4	16.9	19.7	19.2	19.4	17.1	17.5	16.5	16.8	19.9	19.3r	19.0
Tin in Scrap	17.2	14.6	14.1	14.1	11.2	11.5	19.1	12.5	12.5	9.3	11.4	13.3	12.4	12.5	11.0	11.3	9.2	9.4	11.1	10.8r	10.7
Nickel in Scrap	1.0	0.9	0.8	0.9	0.6	0.7	0.6	1.3	0.7	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.5	0.5r	0.5
Total	86.4	75.0	79.8	83.2	64.5	70.6	76.9	68.1	67.7	50.5	63.2	70.8	64.3	65.1	57.3	63.6	54.9	62.3	73.8r	71.7r	70.7
Foundries[a]																					
Zinc-Slab	3.4	2.3	2.3	6.0	4.6	4.5	6.8	6.0	4.4	3.1	4.2	4.5	4.9	4.0	3.1	3.2	2.4	2.5	3.0	3.7	2.8
Zinc in Scrap	4.4	3.4	3.4	3.4	3.2	2.7	2.8	2.7	3.5	3.0	4.1	4.2	5.6	5.2	4.2	4.0	3.2	3.3	4.5r	4.2r	4.3
Lead in Scrap	6.7	5.6	5.4	5.2	5.6	2.8	2.5	2.3	2.6	2.0	2.2	2.5	3.4	3.5	2.6	2.6	1.9	1.9	2.4r	2.2r	2.2
Tin in Scrap	2.4	2.0	1.9	1.8	2.0	1.1	1.0	1.0	1.1	0.9	0.9	1.1	1.6	1.6	1.3	1.4	1.1	1.3	1.5	1.4r	1.4
Total	16.9	13.3	13.0	16.4	15.4	11.1	13.1	12.0	11.6	9.0	11.4	12.3	15.5	14.3	11.2	11.2	8.6	9.0	11.4r	11.5r	10.7
Powder Plants[a]																					
Zinc-Slab	3.5	3.0	1.6	1.2	1.0	0.7	0.7	1.1	1.3	0.8	1.2	1.6	1.6	1.6	1.1	1.1	0.9	1.1	1.2	1.0r	1.0
Zinc in Scrap	0.9	0.8	2.2	2.3	1.7	2.2	2.1	2.1	1.4	0.9	1.5	1.1	1.4	1.1	0.8	0.8	0.7	0.9	1.0	0.8r	0.8
Tin-Refined	1.6	1.4	1.6	1.3	1.0	1.1	1.0	1.2	1.0	0.6	1.0	1.0	1.1	1.0	0.7	0.7	0.6	0.7	0.8	0.7r	0.7
Total	6.0	5.2	5.4	4.8	3.7	4.0	3.8	4.4	3.7	2.3	3.7	3.7	4.1	3.7	2.6	2.6	2.2	2.7	3.0	2.5r	2.5
All Industries																					
Zinc-Slab	185.6	130.3	162.0	179.5	127.7	150.4	192.0	197.6	181.5	115.3	166.2	168.9	176.0	180.1	161.1	174.4	129.6	152.3	177.1	145.6r	149.1
Zinc in Scrap	170.4	144.4	165.1	196.8	160.4	165.9	196.0	183.4	165.7	119.4	156.9	159.9	171.8	178.8	137.0	139.3	117.0	149.8	167.3r	138.4r	146.0
Lead-Refined	3.9	2.3	2.8	3.7	2.5	3.1	3.8	4.9	4.1	2.0	3.5	3.3	3.7	3.9	2.7	2.8	1.6	3.2	2.6	1.3	1.6
Lead in Scrap	35.6	28.6	28.9	30.0	24.9	22.5	22.3	23.9	24.0	17.7	22.5	26.7	26.4	26.9	23.0	23.2	20.8	22.1	26.4r	24.5r	24.4
Tin-Refined	3.1	2.6	2.8	2.8	2.2	2.2	2.0	2.3	2.1	1.2	1.8	1.7	1.9	1.8	1.5	1.5	1.0	1.2	1.4	1.5r	2.2
Tin in Scrap	20.0	17.1	16.5	16.6	13.7	13.0	20.6	14.0	14.1	10.5	12.6	15.0	14.5	14.6	12.7	13.0	10.7	11.2	13.1	12.5r	12.4
Nickel-Refined	5.2	3.6	3.4	5.9	5.1	6.1	6.5	5.4	7.1	7.5	5.5	4.6	4.8	7.6	8.4	11.3	3.5	5.3	5.2	3.5	3.4
Nickel in Scrap	7.4	7.2	3.2	4.2	5.2	5.4	4.7	11.8	4.9	4.5	4.2	3.5	2.6	3.6	2.2	3.0	2.3	3.6	3.6r	2.6r	2.7
TOTAL ALLOYING METAL CONSUMED (Table 3, Item 8)	431.2	336.1	384.7	439.5	341.7	368.6	446.9	443.3	403.5	278.1	373.2	383.6	401.7	417.3	348.6	368.5	286.5	348.7	396.7r	329.9r	341.8

Sources: U.S. Department of the Interior, Bureau of Mines; ABMS.
p - preliminary r - revised
(a) - Direct consumption only; not including consumption of alloying metal in ingots from ingot makers.

Table 3, Item 12.

Net consumption of metals by wire rod mills, brass mills, foundries, powder plants, and other industries

METAL CONTENT, thousands of short tons

	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986p
Net Metal Consumed by:																					
Wire Rod Mills - Copper (Table 3, Item 13)	1,376.0	1,274.0	1,186.0	1,295.0	1,338.7	1,324.9	1,526.3	1,672.3	1,474.3	1,061.3	1,364.0	1,511.2	1,672.7	1,653.0	1,442.8	1,597.9	1,359.0	1,399.8	1,658.6r	1,519.6r	1,636.6
Brass Mills																					
Copper	1,425.4	1,065.8	1,129.5	1,315.7	1,107.1	1,152.4	1,245.6	1,326.9	1,233.2	845.3	1,104.1	1,160.5	1,224.3	1,280.6	1,096.3	1,150.4	881.6	1,092.3	1,218.9r	1,079.1r	1,153.6
Alloy	321.9	242.6	286.5	335.1	258.1	282.9	353.1	358.8	320.5	216.3	294.9	296.8	317.8	334.2	277.5	291.1	220.8	274.7	308.5r	244.2r	257.9
Ingot	6.6	4.4	5.2	6.5	6.2	13.2	16.7	14.5	23.9	5.6	8.3	7.3	7.5	4.5	6.8	19.6	14.0	16.3	18.3	14.6r	15.6
Total (Table 3, Item 16)	1,753.9	1,312.8	1,421.2	1,657.3	1,371.4	1,448.5	1,615.4	1,700.2	1,577.6	1,067.2	1,407.3	1,464.6	1,549.6	1,619.3	1,380.6	1,461.1	1,116.4	1,383.3	1,545.7r	1,337.9r	1,427.1
Foundries																					
Copper	165.4	155.8	141.5	171.2	153.4	130.9	139.6	153.3	144.1	112.6	116.7	123.7	127.3	132.9	105.2	102.4	87.2	89.9r	101.9r	94.6r	96.1
Alloy	16.9	13.3	13.0	16.4	15.4	11.1	13.1	12.0	11.6	9.0	11.4	12.3	15.5	14.3	11.2	11.2	8.6	9.0	11.4r	11.5r	10.7
Ingot	288.0	250.3	268.1	280.5	209.2	222.6	241.3	239.6	224.6	154.4	171.3	190.2	203.4	206.3	181.1	178.8	139.9	145.0	148.9	130.9r	131.8
Total (Table 3, Item 19)	470.3	419.4	422.6	468.1	378.0	364.6	394.0	404.9	380.3	276.0	299.4	326.2	346.2	353.5	297.5	292.4	235.7	243.9	262.2r	237.0r	238.6
Powder Plants																					
Copper	28.4	22.6	25.8	26.3	18.7	23.7	25.5	30.0	29.7	18.4	28.6	29.6	30.0	29.7	21.1	21.2	17.6	21.7	21.8r	20.3r	19.8
Alloy	6.0	5.2	5.4	4.8	3.7	4.0	3.8	4.4	3.7	2.3	3.7	3.7	4.1	3.7	2.6	2.6	2.2	2.7	3.0	2.5r	2.5
Ingot	4.3	6.3	5.9	6.9	7.3	4.6	5.3	6.9	3.2	1.1	2.1	3.2	3.3	3.2	2.3	2.3	1.9	2.4	2.7	2.2r	2.2
Total (Table 3, Item 22)	38.7	34.1	37.1	38.0	29.7	32.3	34.6	41.3	36.6	21.8	34.4	36.5	37.4	36.6	26.0	26.1	21.7	26.8	27.5r	25.0r	24.5
Other Industries[a]																					
Copper	60.4	53.9	49.1	82.8	79.2	74.3	87.1	77.5	66.0	66.5	86.1	101.1	125.1	129.9	122.1	120.3	80.7	75.9	78.8r	78.4r	82.3
Ingot	43.1	62.9	47.3	42.7	34.1	36.0	38.0	39.0	33.0	33.2	54.8	57.5	42.4	52.2	45.4	38.9	36.0	33.8	37.6	38.0	36.6
Total (Table 3, Item 25)	103.5	116.8	96.4	125.5	113.3	110.3	125.1	116.5	99.0	99.7	140.9	158.6	167.5	182.1	167.5	159.2	116.7	109.7	116.4r	116.4r	118.9
All Industries																					
Copper	3,055.6	2,572.1	2,531.9	2,891.0	2,697.1	2,706.2	3,024.1	3,260.0	2,947.3	2,104.1	2,699.5	2,926.1	3,179.4	3,226.1	2,787.5	2,992.2	2,426.1	2,679.6	3,080.0r	2,792.0r	2,988.4
Alloy	344.8	261.1	304.9	356.3	277.2	298.0	370.0	375.2	335.8	227.6	310.0	312.8	337.4	352.2	291.3	304.9	231.6	286.4	322.9r	258.2r	271.1
Ingot (Table 3, Item 10)[b]	342.0	323.9	326.5	336.6	256.8	276.4	301.3	300.0	284.7	194.3	236.5	258.2	256.6	266.2	235.6	239.6	191.8	197.5	207.5	185.7r	186.2
NET METAL CONSUMED (Table 3, Item 12)	3,742.4	3,157.1	3,163.3	3,583.9	3,231.1	3,280.6	3,695.4	3,935.2	3,567.8	2,526.0	3,246.0	3,497.1	3,773.4	3,844.5	3,314.4	3,536.7	2,849.5	3,163.5	3,610.4r	3,235.9r	3,445.7

Sources: U.S. Department of the Interior, Bureau of Mines; ABMS.

p - preliminary r - revised

(a) - Chemical, steel, aluminum and other industries.

(b) - Total consumption of ingot shown here is less than the consumption of metal by ingot makers shown in the details of Table 3, Item 3 and Table 3, Item 8. The difference, shown as Ingot Stocks & Other in Table 3, is primarily melting and other losses in the making of ingot.

Table 4

Supply of wire mill, brass mill, foundry and powder products and their consumption in the end-use markets

	METAL CONTENT, millions of pounds																				
	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986p
(1) Bare Wire	269	235	242	245	226	218	270	209	219	167	199	230	238	236	197	220	179	158	147	119	136
(2) Communication Wire and Cable	565	543	534	716	735	803	766	873	799	584	687	836	885	971	850	851	751	683	727r	636r	603
(3) Building Wire					484	552	580	666	557	483	545	658	718	695	628	660	701	739	888r	955r	945
(4) Magnet Wire					466	427	496	537	446	338	451	516	525	531	443	492	396	444	511r	468r	473
(5) Power Cable					274	236	262	295	292	216	206	233	237	260	274	270	241	212	237r	253r	238
(6) Apparatus Wire and Cordage	1,660	1,578	1,437	1,563	135	137	169	185	179	140	163	209	209	210	214	197	169	212	241r	214r	208
(7) Automotive Wire and Cable (exc. Magnet)					57r	71r	80r	88r	72r	69r	92r	108r	121r	112r	89r	95r	105r	139r	186r	214r	228
(8) Other Insulated Wire and Cable					67	69	90	79	89	81	75	80	89	87	91	96	100	79	87	79r	76
(9) Total Insulated Wire and Cable	2,225	2,121	1,971	2,279	2,218r	2,295r	2,443r	2,723r	2,434r	1,911r	2,219r	2,640r	2,784r	2,866r	2,589r	2,663r	2,463r	2,508r	2,877r	2,819r	2,771
(10) Total Wire Mill Products[a]	**2,494**	**2,356**	**2,213**	**2,524**	**2,444r**	**2,513r**	**2,713r**	**2,932r**	**2,653r**	**2,078r**	**2,418r**	**2,870r**	**3,022r**	**3,102r**	**2,786r**	**2,883r**	**2,642r**	**2,666r**	**3,024r**	**2,938r**	**2,907**
(11) Strip, Sheet and Plate	1,314	1,007	1,033	1,147	883	964	1,075	1,160	1,059	832	965	973	1,027	1,067	873	962r	728r	796r	949r	731r	763
(12) Mechanical Wire	140	115	113	130	111	111	128	126	105	65	92	94	104	112	80	82	61	69	73	62	59
(13) Rod and Bar	901	666	787	886	693	744	910	1,005	899	587	826	900	943	962	810	814	620	770	876	788	794
(14) Plumbing Tube and Pipe	473	399	400	433	378	447	463	519	347	310	374	439	459	483	414	401	369	447	502	524	545
(15) Commercial Tube and Pipe	497	409	423	514	441	418	432	463	411	268	331	340	376	420	356	371	257	298	335	311	321
(16) Total Brass Mill Products (page 19)	**3,325**	**2,596**	**2,756**	**3,110**	**2,506**	**2,684**	**3,008**	**3,273**	**2,821**	**2,062**	**2,588**	**2,746**	**2,909**	**3,044**	**2,533**	**2,630r**	**2,035r**	**2,390r**	**2,735r**	**2,416r**	**2,482**
(17) Total Foundry Products	**930r**	**822r**	**810r**	**879r**	**782**	**733**	**781**	**820**	**732**	**631r**	**606**	**642**	**662**	**726**	**572r**	**564r**	**444**	**498r**	**594r**	**470r**	**477**
(18) Total Powder Products	**67**	**56**	**62**	**61**	**47**	**52**	**54**	**64**	**69**	**46**	**65**	**64**	**56**	**54**	**38**	**44**	**34**	**39**	**43**	**37**	**35**
(19) Domestic Products - Total	**6,816**	**5,830**	**5,841**	**6,574**	**5,779r**	**5,982r**	**6,559r**	**7,089r**	**6,275r**	**4,817r**	**5,677r**	**6,322r**	**6,649r**	**6,926r**	**5,929r**	**6,121r**	**5,155r**	**5,583r**	**6,306r**	**5,861r**	**5,901**
(20) Net Imports of Mill Products (page 20)	232	177	261	129	132	170	213	179	89	55	218	188	276	181	−20	209	180	282	489r	413r	436
(21) Mill Products to Domestic Market*	**7,048**	**6,007**	**6,102**	**6,703**	**5,911r**	**6,152r**	**6,772r**	**7,268r**	**6,364r**	**4,872r**	**5,895r**	**6,510r**	**6,925r**	**7,107r**	**5,909r**	**6,330r**	**5,335r**	**5,865r**	**6,795r**	**6,274r**	**6,337**
(22) Building Construction	2,255	1,881	1,864	2,060	1,854	2,021	2,208	2,377	1,930	1,553r	1,870	2,124	2,283	2,311	1,930r	2,022r	1,839r	2,158r	2,508r	2,511r	2,574
(23) Electrical and Electronic Products	1,686	1,443	1,446	1,712	1,602	1,628	1,718	1,845	1,698	1,171r	1,473	1,650	1,753	1,867	1,617	1,732	1,455	1,471r	1,649r	1,421r	1,462
(24) Industrial Machinery and Equipment	1,304	1,122	1,128	1,217	1,074	1,027	1,158	1,235	1,106	816r	957	1,038	1,127	1,142	991	1,072	832	892r	984r	881r	878
(25) Transportation Equipment	818	673	715	745	634r	737r	805r	919r	773r	630r	866r	940r	930r	907r	639r	710r	568r	704r	883r	816r	798
(26) Consumer and General Products	985	888	949	969	747	739	883	892	857	702r	729	758	832	880	732	794r	641r	640r	771r	645r	625

*Markets include – Building Construction: Plumbing & Heating; Building Wiring; Air Conditioning & Commercial Refrigeration; Builders' Hardware; Architectural.
Electrical & Electronic Products: Telecommunications; Power Utilities; Lighting & Wiring Devices; Business Electronics.
Industrial Machinery & Equipment: In-Plant Equipment; Industrial Valves & Fittings; Heat Exchangers; Off-Highway Vehicles; Non-Electrical Instruments.
Transportation Equipment: Automobile, Truck & Bus; Railroad; Marine; Aircraft & Aerospace.
Consumer & General Products: Appliances; Fasteners & Closures; Military & Commercial Ordnance; Coinage; Consumer Electronics; Utensils & Cutlery; Miscellaneous.

Sources: U.S. Department of Commerce, Bureau of the Census and Bureau of Industrial Economics; Metal Powder Producers Assn. (Line 18—1978 on); CDA.
p - preliminary r - revised
(a) - Copper content.

Table 4, Item 16.

Supply of brass mill products in the United States

METAL CONTENT, millions of pounds

	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986p
Strip, Sheet and Plate																					
Copper	354	240	190	238	185	236	239	269	261	212	227	233	234	259	201	227	176	203	254	208	206
Alloy	960	767	843	909	698	728	836	891	798	620	738	740	793	808	672	735r	552r	593r	695r	523r	557
Total	1,314	1,007	1,033	1,147	883	964	1,075	1,160	1,059	832	965	973	1,027	1,067	873	962r	728r	796r	949r	731r	763
Mechanical Wire																					
Copper	15	11	10	15	14	16	20	14	15	7	10	14	20	26	14	16	15	13	12	11	8
Alloy	125	104	103	115	97	95	108	112	90	58	82	80	84	86	66	66	46	56	61	51	51
Total	140	115	113	130	111	111	128	126	105	65	92	94	104	112	80	82	61	69	73	62	59
Rod and Bar																					
Copper	146	119	130	146	115	109	117	135	149	77	100	112	116	117	111	112	83	82	93	95	89
Alloy	755	547	657	740	578	635	793	870	750	510	726	788	827	845	699	702	537	688	783	693	705
Total	901	666	787	886	693	744	910	1,005	899	587	826	900	943	962	810	814	620	770	876	788	794
Plumbing Tube and Pipe																					
Copper	448	381	385	415	363	431	446	502	335	302	366	432	451	475	407	393	364	441	496	519	542
Alloy	25	18	15	18	15	16	17	17	12	8	8	7	8	8	7	8	5	6	6	5	3
Total	473	399	400	433	378	447	463	519	347	310	374	439	459	483	414	401	369	447	502	524	545
Commercial Tube and Pipe																					
Copper	362	260	276	363	304	288	305	322	265	171	221	239	280	322	273	284	195	231	271	259	267
Alloy	135	149	147	151	137	130	127	141	146	97	110	101	96	98	83	87	62	67	64	52	54
Total	497	409	423	514	441	418	432	463	411	268	331	340	376	420	356r	371	257	298	335	311	321
All Mill Products																					
Copper	1,325	1,011	991	1,177	981	1,080	1,127	1,242	1,025	769	924	1,030	1,101	1,199	1,006	1,032	833	970	1,126	1,092	1,112
Alloy	2,000	1,585	1,765	1,933	1,525	1,604	1,881	2,031	1,796	1,293	1,664	1,716	1,808	1,845	1,527	1,598r	1,202r	1,410r	1,609r	1,324r	1,370
TOTAL BRASS MILL PRODUCTS	3,325	2,596	2,756	3,110	2,506	2,684	3,008	3,273	2,821	2,062	2,588	2,746	2,909	3,044	2,533	2,630r	2,035r	2,380r	2,735r	2,416r	2,482

Sources: U.S. Department of Commerce, Bureau of Industrial Economics; CDA.

p - preliminary r - revised

Supply of brass mill products in selected countries

METAL CONTENT, millions of pounds

	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986p
Benelux	NA	NA	NA	NA	NA	NA	NA	329	304	258	316	335	306	314	299	266	232	209	235	234	227
Canada	253	228	261	269	231	221	236	281	264	192	223	232	272	264	191	229	155	183	206	195	196
France	492	479	497	597	585	580	598	667	603	476	569	586	590	638	657	615	600	567	617r	561	546
Germany	831	780	968	1,103	1,067	986	1,130	1,311	1,157	932	1,219	1,207	1,219	1,337	1,403	1,277	1,256	1,378	1,546	1,511r	1,560
Italy	397	437	453	479	527	494	572	626	654	520	647	639	652	650	734	694	668	697	767	809	885
Japan	730	929	1,030	1,160	1,201	1,152	1,330	1,682	1,298	1,148	1,546	1,573	1,722	1,874	1,912	1,832	1,741	1,909	2,181	2,095	2,112
Scandinavia	268	247	272	277	279	260	286	316	316	247	285	295	321	348	340	320	324	346	380	357	372
Spain	98	92	110	138	132	133	167	193	181	133	178	183	174	191	184	148	172	164	166	163	166
Switzerland	109	99	99	110	116	104	100	114	118	81	96	116	105	111	120	106	98	106	121	123	116
United Kingdom	1,041	924	1,019	1,035	956	842	905	1,004	903	737	803	827	845	797	644	563	597	565	620	601	577
United States	3,325	2,596	2,756	3,110	2,506	2,684	3,008	3,273	2,821	2,062	2,588	2,746	2,909	3,044	2,533	2,630r	2,035r	2,380r	2,735r	2,416r	2,482

Sources: World Bureau of Metal Statistics; U.S. Department of Commerce, Bureau of Industrial Economics; CDA.

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NA - not available

Table 4, Item 20.

Imports and exports of wire mill, brass mill and powder products

	METAL CONTENT, millions of pounds																				
	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986p
Imports of:																					
Wire Rod	7.8	6.1	13.0	2.4	2.4	3.0	3.0	5.3	2.8	1.5	2.5	13.8	7.0	6.2	5.4	6.0	7.4	8.6	18.1	22.8	28.2
Bare Wire (incl. Stranded)	31.0	24.0	28.0	22.0	35.0	27.0	19.3	26.9	42.9	22.0	39.0	27.5	32.8	30.8	18.9	22.3	26.6	35.0	38.7	42.6	50.6
Insulated Wire and Cable							11.5	14.0	12.3	9.2	11.0	11.1	18.2	23.4	21.8	19.2	19.9	29.3	44.7	54.3	61.2
Total Wire Mill Products	**38.8**	**30.1**	**41.0**	**24.4**	**37.4**	**30.0**	**33.8**	**46.2**	**58.0**	**32.7**	**52.5**	**52.4**	**58.0**	**60.4**	**46.1**	**47.5**	**53.9**	**72.9**	**101.5**	**119.7**	**140.0**
Copper - Strip, Sheet and Plate	35.0	41.9	77.5	30.9	26.9	38.7	45.7	48.7	46.9	37.8	59.9	64.7	85.8	80.1	54.1	71.8	59.1	67.6	103.8	82.4	77.3
Rod and Bar	5.2	2.8	8.7	1.4	3.5	4.1	6.1	6.0	6.7	4.2	6.6	8.0	17.5	17.0	12.0	12.4	9.3	9.2	13.1	14.0	10.7
Tube and Pipe	51.1	31.5	48.7	31.4	36.4	43.1	51.6	55.0	31.3	24.3	33.7	39.9	46.3	44.8	22.9	33.8	35.7	55.1	65.8	65.1	85.2
Alloy - Strip, Sheet and Plate	63.8	59.8	64.6	45.5	47.8	74.4	92.4	84.9	57.2	51.4	104.6	105.7	153.7	121.5	81.3	140.7	124.3	158.5	232.0	191.4	172.7
Mechanical Wire	2.3	1.9	2.4	2.0	3.2	4.0	4.3	5.7	4.1	2.6	6.3	7.9	9.9	9.7	7.9	10.4	10.3	11.7	14.8	13.2	22.8
Rod and Bar	44.0	28.0	15.3	12.0	6.9	7.3	12.5	17.9	16.2	11.7	41.7	33.4	51.9	48.3	26.3	121.9	51.4	47.8	83.0	51.0	55.8
Tube and Pipe	46.7	36.3	50.4	44.9	40.3	47.6	53.1	48.2	40.4	32.4	47.3	47.2	69.5	54.4	43.6	51.5	45.5	54.7	71.8	64.0	62.8
Total Brass Mill Products	**248.1**	**202.2**	**267.6**	**168.1**	**165.0**	**219.2**	**265.7**	**266.4**	**202.8**	**164.4**	**300.1**	**306.8**	**434.6**	**375.8**	**248.1**	**442.5**	**335.6**	**404.6**	**584.3**	**481.1**	**487.3**
Total Powder Products	**2.9**	**3.0**	**3.5**	**2.8**	**2.3**	**2.4**	**2.7**	**2.3**	**1.7**	**1.6**	**2.6**	**2.4**	**2.5**	**2.3**	**2.0**	**2.7**	**2.3**	**3.1**	**3.3**	**2.5**	**2.8**
TOTAL IMPORTS	**289.8**	**235.3**	**312.1**	**195.3**	**204.7**	**251.6**	**302.2**	**314.9**	**262.5**	**198.7**	**355.2**	**361.6**	**495.1**	**438.5**	**296.2**	**492.7**	**391.8**	**480.6**	**689.1**	**603.3**	**630.1**
Exports of:																					
Wire Rod	10.1	10.4	5.4	7.2	8.3	14.6	10.9	10.4	14.0	10.9	8.5	11.2	13.0	30.9	53.5	30.7	18.2	12.5	13.2	5.2	16.8
Bare Wire (incl. Stranded) [a]	6.3	8.8	4.1	8.1	4.2	2.9	5.5	10.4	11.3	7.4	9.6	11.7	18.7	18.8	13.9	15.5	16.7	18.3	19.4	17.6	15.8
Insulated Wire and Cable	22.9	20.3	23.5	26.1	30.3	29.8	35.5	41.1	55.2	69.6	66.8	98.5	121.8	103.0	86.3	112.4	99.3	98.8	97.3r	93.6r	94.4
Total Wire Mill Products	**39.3**	**39.5**	**33.0**	**41.4**	**42.8**	**47.3**	**51.9**	**61.9**	**80.5**	**87.9**	**84.9**	**121.4**	**153.5**	**152.7**	**153.7**	**158.6**	**134.2**	**129.6**	**129.9r**	**116.4r**	**127.0**
Copper - Strip, Sheet and Plate	1.6	1.8	1.7	3.2	3.3	1.5	0.9	1.8	2.2	0.8	1.4	4.2	2.9	3.3	6.7	7.3	4.3	3.1	8.7	8.1	2.7
Rod and Bar	2.1	0.7	2.2	2.0	3.7	0.9	1.7	4.4	2.7	8.1	1.4	2.6	6.0	12.0	37.0	10.0	13.8	4.0	3.1	2.8	2.0
Tube and Pipe	1.0	1.4	1.2	1.9	2.1	2.5	2.3	15.5	13.5	4.4	5.1	6.2	5.8	18.8	38.9	24.1	10.1	8.0	9.5	10.0	11.8
Alloy - Strip, Sheet and Plate	2.4	2.2	2.5	4.7	4.6	4.2	7.9	12.2	14.5	6.4	8.3	8.6	9.0	10.4	17.3	28.4	10.2	11.6	11.7	15.8	11.4
Mechanical Wire	2.2	1.8	2.2	2.4	4.0	3.5	2.5	3.6	8.4	5.0	4.8	4.2	6.9	8.2	8.0	7.9	12.5	11.6	9.1	10.5	11.1
Rod and Bar	3.5	4.4	3.3	4.2	6.1	12.9	14.3	17.4	30.4	15.5	15.2	15.8	19.3	15.2	20.1	18.6	11.0	15.6	16.3	14.6	14.9
Tube and Pipe	3.9	4.2	3.0	3.5	3.3	5.1	4.1	13.7	16.0	13.2	12.4	7.0	12.0	32.9	31.0	26.6	14.1	13.9	10.0	9.9	9.7
Total Brass Mill Products	**16.7**	**16.5**	**16.1**	**21.9**	**27.1**	**30.6**	**33.7**	**68.6**	**87.7**	**53.4**	**48.6**	**48.6**	**61.9**	**100.8**	**159.0**	**122.9**	**76.0**	**67.8**	**68.4**	**71.7**	**63.6**
Total Powder Products	**2.2**	**2.0**	**2.3**	**3.5**	**3.0**	**3.9**	**3.7**	**5.0**	**5.4**	**2.5**	**3.7**	**3.5**	**3.8**	**3.9**	**3.9**	**2.5**	**2.1**	**1.7**	**1.9**	**2.5**	**3.0**
TOTAL EXPORTS	**58.2**	**58.0**	**51.4**	**66.8**	**72.9**	**81.8**	**89.3**	**135.5**	**173.6**	**143.8**	**137.2**	**173.5**	**219.2**	**267.4**	**316.6**	**284.0**	**212.3**	**199.1**	**200.2r**	**190.6r**	**193.6**
NET IMPORTS (Table 4, Item 24)	**231.6**	**177.3**	**260.7**	**128.5**	**131.8**	**169.8**	**212.9**	**179.4**	**88.9**	**54.9**	**218.0**	**188.1**	**275.9**	**181.1**	**−20.4**	**208.7**	**179.5**	**281.5**	**488.9r**	**412.7r**	**436.5**

Sources: U.S. Department of Commerce, Bureau of the Census; Copper & Brass Fabricators Council, Inc; CDA.

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(a) - Stranded not included prior to 1972.

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